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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/533,231	04/29/2005	Yasuhito Yuasa	10873.168SUSWO	5067
52835 7590 09/17/2008 HAMRE, SCHUMANN, MUELLER & LARSON, P.C. P.O. BOX 2902 MINNEAPOLIS, MN 55402-0902				
EXAMINER				
BURNEY, RACHEL L				
ART UNIT		PAPER NUMBER		
1795				
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09/17/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/533,231

**Applicant(s)**

YUASA ET AL.

**Examiner**

Rachel L. Burney

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 August 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 April 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1 and 11-16 are rejected under 35 U.S.C. 102(e) as being anticipated by US PGPub 2003/0091923, Kobayashi et al.

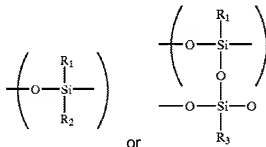
With respect to claims 1 and 11, Kobayashi discloses a two-component developer comprising a carrier and a polymer toner (PP 0018), wherein the carrier is a resin-coated carrier (PP 0025), wherein the coating resin may comprise a fluorine-modified silicone resin (PP 0030-0033), wherein the silicone resin may be coupled with an aminosilane coupling agent, which is present in an amount of about 23% by weight (PP 0100). The toner may comprise a polymer (binder), a colorant, and surface active agents (PP 0045), and a fixability improving agent (PP 0046), such as carnauba wax, polypropylene wax, and polyethylene wax (PP 0057), which are the ester wax and the synthetic wax of the instant application (see US 2006/0014094, PP 0073 and 0102).

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With respect to claim 12, Kobayashi further discloses that the developer may be 5% by weight of the toner and 95% by weight of the carrier (PP 0079).

With respect to claim 13, Kobayashi further discloses that the surface active agents may be present in an amount of 0.01 to 10% by weight (PP 0054).

With respect to claims 14-16, Kobayashi further discloses that the fluorine-modified silicone resin may be crosslinkable (PP 0030), which may be obtained hydrolyzing a polyorganosiloxane having the formula:



wherein R<sub>1</sub>, R<sub>2</sub>, and R<sub>3</sub> may each be a hydrogen, a halogen, a hydroxyl group, a methoxy group, or an alkyl group with a perfluoroalkyl-containing organosilicone compound, having the formula CF<sub>3</sub>CH<sub>2</sub>CH<sub>2</sub>Si(OCH<sub>3</sub>)<sub>3</sub> (PP 0031-0033).

### ***Claim Rejections - 35 USC § 103***

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

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4. Claims 2 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over US PGPub 2003/0091923, Kobayashi et al. as applied to claim 1 above, and further in view of US PGPub 2003/0152856, Mizoe et al.

With respect to claim 2, Kobayashi discloses the developer of claim 1 as discussed above, but fails to teach the preparation of the toner. Mizoe discloses a toner comprising a binder resin, colorant, and an additive (PP 0064) and a Fischer-Tropsche wax (PP 0192) wherein the wax has a DCS heat-absorption main peak of 60-140°C and an acid value of 50 mgKOH/g (PP 0194) which is a block copolymer of brassidic acid, a long-chain alkyl alcohol, and a hydrocarbon wax (PP 0192). The toner may be used in a two-component developer (PP 0362-0367). The toner has an inorganic fine powder (PP 0038) that has an average size of 4-80 nm in an amount of 0.1-8% (PP 0140). The wax of Mizoe is a release agent (PP 0192). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the toner of Mizoe in the developer of Kobayashi because it is a known toner used in developers, and is similar to the toner of Kobayashi, so therefore one of ordinary skill in the art would have a reasonable expectation of success in substituting the toners.

With respect to claim 3, Kobayashi and Mizoe fail to disclose the molecular weight distribution of the wax, however because it teaches a similar wax used in a toner, it would be reasonable to conclude that the wax would have a similar molecular weight distribution.

5. Claims 4, 5, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over US PGPub 2003/0091923, Kobayashi et al. as applied to claim 1 above, and further in view of US PGPub 2002/0086229, Yuasa et al.

With respect to claims 4 and 7, Kobayashi discloses the developer of claim 1 as discussed above, but fails to teach the preparation of the toner. Yuasa discloses a two-component developer comprising a toner comprising an additive, a wax, and a binding resin (PP 0013) and a carrier having a core and a coating resin (PP 0056) wherein the wax is an ester wax having an iodine value of less than 25 and a saponification value of 30-300 (PP 0021) or the wax is a derivative of glycol fatty acid esters or sorbitan fatty acid esters (PP 0100). The ester based waxes serve as a fixing assistant for improving the fixability (PP 0095). The toner of Yuasa '229 has an inorganic fine powder (PP 0037) wherein the powder has an average particle diameter of 5 to 100 nm (PP 0041) and is present in an amount of .1-10 % (PP 0042). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the toner of Yuasa in the developer of Kobayashi because it is a known toner used in developers, and is similar to the toner of Kobayashi, so therefore one of ordinary skill in the art would have a reasonable expectation of success in substituting the toners.

With respect to claim 5, Kobayashi and Yuasa fail to disclose the molecular weight distribution of the wax, however because it teaches a similar wax used in a toner, it would be reasonable to conclude that the wax would have a similar molecular weight distribution.

6. Claims 6 and 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over US PGPub 2003/0091923, Kobayashi et al. as applied to claim 1 above, and further in view of US Patent 6117607, Shimizu et al. Kobayashi discloses the toner of claim 1 as discussed above, but fails to teach the preparation of the toner. Shimizu discloses a toner comprising positively chargeable and negatively chargeable inorganic fine particles (column 2, lines 55-67), wherein the toner may be used in a two-component developer (column 1, lines 33-40). Shimizu teaches the inorganic fine powders may have a weight ratio of 50/50 to 10/90 of positively charged inorganic powders to negatively charged fine powders (column 3, lines 25-33) wherein the total makes about 1.3 wt% of the toner (table 2, column 14, lines 15-35) which would make the amounts of the individual inorganic powders substantially similar to those in the instant application. The inorganic powders are broken into multiple groups depending on size, the first group has an average size of 30-120nm and the second group is less than 20nm (column 3, lines 34-39). Shimizu does not discuss the ignition loss of the inorganic fine powders, but since it is a similar product in a similar embodiment, it is reasonable to conclude that the ignition losses would be substantially similar to that of the instant application. The multiple inorganic fine particles make it possible to substantially eliminate problems inherent in nonmagnetic development (column 2, lines 55-67). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the toner of Shimizu in the developer of Kobayashi because it is a known toner used in developers, and is similar to the toner of Kobayashi, so therefore

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one of ordinary skill in the art would have a reasonable expectation of success in substituting the toners.

7. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over US PGPub 2003/0091923, Kobayashi et al. Kobayashi does not disclose the amount by weight of the polyorganosiloxane in the weight of the perfluoroalkyl group-containing organosilicon, but it would have been obvious to one of ordinary skill to find an amount that is workable in the developer, which could reasonably fall in the range of 3 to 20%.

8. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over US PGPub 2003/0091923, Kobayashi et al. as applied to claim 1 above, and further in view of US Patent 6579653, Yuasa et al. Kobayashi discloses the toner of claim 1 as discussed above, but fails to teach the specific aminosilane coupling agent as described in the instant application. Yuasa discloses an aminosilane coupling agent may be  $\gamma$ -(2-aminoethyl) aminopropylmethyldimethoxysilane (column 26, lines 26-43). It would have been obvious to one of ordinary skill in the art at the time of the invention to use the aminosilane coupling agent of Yuasa as the aminosilane coupling agent of Kobayashi because it is a known aminosilane coupling agent and one would have a reasonable expectation of success in doing so.



### ***Response to Arguments***

9. Applicant's arguments, see pages 8-10, filed 08/01/2008, with respect to the rejection(s) of claim(s) 1, 6, 11, 12, and 14-18 under Yuasa have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made as discussed above.

### ***Conclusion***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rachel L. Burney whose telephone number is (571)272-9802. The examiner can normally be reached on Mon-Thurs: 7:30-6:00 PM, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 571-272-1385. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mark F. Huff/  
Supervisory Patent Examiner, Art Unit 1795

RLB